phant is trained as a matter of ordinary routine to do at least sixteen different things by command, and in their work they show more intelligence than some human beings.

A young friend in the forest department of Burma, A. E. Ross, relates a striking case of long memory in a working elephant. Among the grass-cutters who supplied a force of working elephants with green food, there was one who had incurred the pronounced dislike of one of the animals. Before matters reached a crisis, however, the grass-cutter was sent some distance away to work in another camp.

About a year later the man came back and quietly drifted into the ranks of his fellows, fully believing that during his absence the elephant had forgotten him. But not so. At the first assembly of elephants and men, the elephant espied his old enemy in the ranks of the grass-cutters and instantly charged him. The man fled for his life, and never dared to return.

To my mind, there is no more effective test of a wild animal's reasoning powers than its course when ill or wounded. I have seen wounded buffaloes leave the herd without an instant's delay, turn off sharply to one side and seek immediate concealment in a ravine. While a broken leg is healing, a buffalo will work its way into the head of the most rugged ravine it can find, where the cut banks are highest and men most seldom come. But when well and strong, the same animal feeds well afield, where it can see far and wide and gain a long start from every approaching horseman.

Of all wild animals in captivity, apes and monkeys most quickly learn that a sick monkey needs a doctor. But not all do this, however; in fact, none but the brightest.

One of the most amusing performances I ever saw in which primates were the actors was a ring-tailed monkey showing to three other monkeys a cavity in one of the molars of a bonneted monkey, and telling them all about it. The bonneted monkey sat quietly, opened its mouth wide and held still for at least a minute. The ring-tailed monkey peered in, discovered the defective molar, with its left hand pushed down the lower lip, dentist-fashion, and put its right forefinger on the tooth, while it solemnly explained the situation. The other monkeys crowded around, wrinkled their brows and solemnly peered into the open mouth to see the cavity that needed filling.

Through their extra-close and human-like daily association with the men who care for them, apes quickly learn that in sickness or trouble they need human help. So quickly do they learn (some of them, at least) that it is safe and wise to swallow anything that a friend offers in a spoon, they even accept and swallow medicines that do not taste good. To me, this is evidence of sound reasoning; for from wild men to wild mice the first law of nature is that whatever does not taste good is not good to swallow. Of wild animals generally, about ninety-nine out of every hundred will fight the doctor, at least during first treatment. Through experience, however, they do sometimes learn that when ill it is good to be doctored.

Last June we helped our fine Altai wapiti doe out of serious trouble, holding her by main strength during the operation. At that time I had a strong impression that she realized we were doing our best to help her. Afterward she became tame. In September, when I was absent, she was badly gored by her mate, and for a time her life hung by a thread. Said Keeper John Quinn in October: "And I tell ye, sir, we couldn't a saved her nohow if she hadn't been so sensible and kept so quiet and let us treat them wounds twice every day. She really knew what we was a doin' for her. Now she's all right."

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Nearly every intelligent chimpanzee and orang-utan quickly learns what it means to have human help when in trouble, and the assistance they sometimes render the doctor is of great value. In the treatment of abscesses, they submit to the knife voluntarily and without restraint in a way that is astonishing. Our Soko was at first an active, nervous and almost uncontrollable chimpanzee, possessed of remarkable strength. When an abscess developed on her jaw, we dreaded the struggle that seemed impending in order to use the lance. On the day previous to that fixed for the operation, Dr. Blair stood in front of her cage, studying the situation. Soko came forward, close to the bars, and pressed her face against them. The doctor reached forward and began to feel the abscess; and Soko turned that side of her face to give him the best opportunity. Finding that she not only did not flinch but seemed anxious to have something done, he whipped out his knife and successfully opened and discharged the abscess, through the grating, while the animal resolutely held her afflicted jaw motionless against the bars. She accepted the cut as if she liked it. Since that time she has voluntarily submitted to two similar operations and all the after-treatment they involved.

In the first year of the Zoölogical Park, before we had a veterinary surgeon, I saved the life of a baby orang-utan by two operations of half an hour each, solely by reason of the fact that the absurd little creature assisted me throughout intelligently and earnestly.

Reason is an appreciation of the fact that particular conditions and results are produced by specific causes. Two animals do not fight unless one reasons that it can vanquish the other. To-day there are savages in both the Old World and the New whose reasoning powers are not so good as those of the little chief hare, which knows enough to house itself comfortably where its enemies cannot get at it, and to pack away enough food to last throughout the long winter.

Some species of animals are mentally higher than others, just as some races of men are, and some are keener than others in the line of original thought. There are millions of men who know only to do as they have seen other men do. The mechanical men who are given to original reasoning we call inventors. The animal world also contains its share of inventors. Of course it is true that not every animal possesses all the mental attributes; and there are plenty of men and women of whom the same may be said.

I once asked Carl Hagenbeck, who has turned out of his great animal park at Hamburg many magnificent groups of trained animals, this question: "In general mental capacity and susceptibility to training how do the lion, tiger, leopard, jaguar and puma stand in relation to each other?"

In his reply he placed the lion and tiger in a separate and superior class, and the other three species in another, of less intelligence and tractability. He said, in substance: "The lion and tiger are alike in good temper and reliability. The leopard, jaguar and puma are also equal in character, but are not so good as the other two. As to the intelligence of these five animals, the one [species] is as intelligent as the other, but with these animals it is just the same as with human beings: some learn quickly, others are stupid and give much trouble in training. For example, take the two lions and one tiger which my trainer has recently educated for his large group. In one month he trained one of the lions to do very difficult tricks, and in five weeks the tiger learned to do all the tricks of the other animals in the group. The other lion was no good at all. Although a fine beast to look at, it was nervous and stupid."

Regarding the comparative intelligence of animals, opinions differ, according to conditions. All the Western trappers whom I know regard the wolverene as the wisest and most resourceful of all animals, as well as the greatest

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"... KISS THE ONE YOU LOVE BEST"--By Grace G. Wiederseim